AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims

1-5. (Cancelled)

6. (Withdrawn)   A low Co hydrogen storage alloy having a $CaCu_5$-type crystal structure that can be represented by the general formula $MmNi_aMn_bAl_cCo_dFe_e$, wherein Mm is a Misch metal, $4.0 \leq a \leq 4.7$, $0.3 \leq b \leq 0.65$, $0.2 \leq c \leq 0.5$, $0 < d \leq 0.35$, $0 < e \leq 0.11$, $5.2 \leq a + b + c + d + e \leq 5.5$, wherein the a-axis length of the crystal lattice of said $CaCu_5$-type crystal structure is 499 pm or more, and the c-axis length is 405 pm or more.

7. (Withdrawn)   The low Co hydrogen storage alloy according to claim 6, wherein, in a composition of $5.25 \leq a + b + c + d + e < 5.30$, the a-axis length of the crystal lattice is not less than 500.5 pm and not more than 502.7 pm, and the c-axis length is not less than 406.6 pm and not more than 407.9 pm.

8. (Withdrawn)   The low Co hydrogen storage alloy according to claim 6, wherein, in a composition of $5.30 \leq a + b + c + d + e < 5.35$, the a-axis length of the crystal lattice is not less than 500.0 pm and not more than 502.4 pm, and the c-axis length is not less than 406.9 pm and not more than 408.2 pm.

9. (Withdrawn)   The low Co hydrogen storage alloy according to claim 6, wherein, in a composition of $5.35 \leq a + b + c + d + e < 5.40$, the a-axis length of the crystal lattice is not less than 499.8 pm and not more than 502.3 pm, and the c-axis length is not less than 407.0 pm to 408.3 pm.

10. (Withdrawn)   The low Co hydrogen storage alloy according to claim 6, wherein, in a composition of $5.40 \leq a + b + c + d + e < 5.45$, the a-axis length of the crystal

lattice is not less than 499.7 pm and not more than 502.3 pm, and the c-axis length is not less than 407.1 pm and not more than 408.4 pm.

11. (Currently Amended) A low Co hydrogen storage alloy having a $CaCu_5$ crystal structure that can be represented by the general formula $MmNi_aMn_bAl_cCo_d$, wherein Mm is a Misch metal, $4.31 \leq a \leq 4.7$, $0.3 \leq b \leq 0.65$, ~~$0.2 \leq c \leq 0.5$~~ $\underline{0.2 \leq c < 0.37}$, $0 < d \leq 0.35$, ~~$5.2 \leq a + b + c + d \leq 5.5$~~,

wherein, in a composition of $5.25 \leq a + b + c + d < 5.30$, the a-axis length of the crystal lattice is not less than 500.5 pm and not more than 502.7 pm, and the c-axis length is not less than 405.6 pm and not more than 406.9 pm,

wherein the pulverization residual rate obtained by the following equation is 50% or more:

Pulverization residual rate (%) = (post-cycling particle size/pre-cycling particle size) x 100,

when a hydrogen storage alloy is ground and screened to select particles with a particle size in the range of 20 μm and 53 μm to provide hydrogen storage alloy powder, and after measuring with a particle size distribution measuring device the average particle size (pre-cycling particle size, D_{50}) of the hydrogen storage alloy powder; 2 g of the hydrogen storage alloy powder is weighed and placed into a PCT holder; the surfaces thereof are cleaned twice under hydrogen pressure of 1.75 MPa; then activation is carried out twice by introducing hydrogen of 3 MPa; next, a cycle test using a PCT device is then repeated 50 times, wherein hydrogen gas of 3 MPa is introduced into 2.0 g of the hydrogen storage alloy powder to absorb hydrogen, and the hydrogen is desorbed at 45°C; and the average particle size of the hydrogen storage alloy powder after the test of the 50 cycles (post-cycling particle size, D_{50}) is measured with a particle size distribution measuring device.

12. (Withdrawn) The low Co hydrogen storage alloy according to claim 6, wherein the pulverization residual rate obtained by the following equation is 50% or more:

Pulverization residual rate (%) = (post-cycling particle size/pre-cycling particle size) x 100,

when a hydrogen storage alloy is ground and screened to select particles with a particle size in the range of 20 μm and 53 μm to provide hydrogen storage alloy powder, and after measuring with a particle size distribution measuring device the average particle size (pre-cycling particle size, D_{50}) of the hydrogen storage alloy powder; 2 g of the hydrogen storage alloy powder is weighed and placed into a PCT holder; the surfaces thereof are cleaned twice under hydrogen pressure of 1.75 MPa; then activation is carried out twice by introducing hydrogen of 3 MPa; next, a cycle test using a PCT device is then repeated 50 times, wherein hydrogen gas of 3 MPa is introduced into 2.0 g of the hydrogen storage alloy powder to absorb hydrogen, and the hydrogen is desorbed at 45°C; and the average particle size of the hydrogen storage alloy powder after the test of the 50 cycles (post-cycling particle size, D_{50}) is measured with a particle size distribution measuring device.

13. (Cancelled)

14. (Withdrawn)   A cell having a configuration comprising the low Co hydrogen storage alloy according to claim 6 as a negative-electrode active material.

15. (Previously Presented)   A cell having a configuration comprising the low Co hydrogen storage alloy according to claim 11 as a negative-electrode active material.

16. (Withdrawn)   A cell having a configuration comprising the low Co hydrogen storage alloy according to claim 12 as a negative-electrode active material.

17. (Previously Presented)   A low Co hydrogen storage alloy having a $CaCu_5$ crystal structure according to claim 11, wherein $0.4 < b \le 0.55$ in the general formula $MmNi_aMn_bAl_cCo_d$.

18. (Previously Presented)   A low Co hydrogen storage alloy having a $CaCu_5$ crystal structure according to claim 11, wherein $0 < d \le 0.2$ in the general formula $MmNi_aMn_bAl_cCo_d$.

19. (Previously Presented)   A cell having a configuration comprising a low Co hydrogen storage alloy according to claim 17 as a negative-electrode active material.

20. (Previously Presented)   A cell having a configuration comprising a low Co hydrogen storage alloy according to claim 18 as a negative-electrode active material.

21. (Currently Amended)   A low Co hydrogen storage alloy having a $CaCu_5$ crystal structure that can be represented by the general formula $MmNi_aMn_bAl_cCo_d$, wherein Mm is a Misch metal, $4.31 \leq a \leq 4.7$, $0.3 \leq b \leq 0.65$, ~~$0.2 \leq c \leq 0.5$~~ $\underline{0.2 \leq c < 0.37}$, $0 < d \leq 0.35$, ~~$5.2 \leq a + b + c + d \leq 5.5$~~,

wherein, in a composition of $5.30 \leq a + b + c + d < 5.35$, the a-axis length of the crystal lattice is not less than 500.0 pm and not more than 502.4 pm, and the c-axis length is not less than 405.9 pm and not more than 407.2 pm,

wherein the pulverization residual rate obtained by the following equation is 50% or more:

Pulverization residual rate (%) = (post-cycling particle size/pre-cycling particle size) x 100,

when a hydrogen storage alloy is ground and screened to select particles with a particle size in the range of 20 μm and 53 μm to provide hydrogen storage alloy powder, and after measuring with a particle size distribution measuring device the average particle size (pre-cycling particle size, D_{50}) of the hydrogen storage alloy powder; 2 g of the hydrogen storage alloy powder is weighed and placed into a PCT holder; the surfaces thereof are cleaned twice under hydrogen pressure of 1.75 MPa; then activation is carried out twice by introducing hydrogen of 3 MPa; next, a cycle test using a PCT device is then repeated 50 times, wherein hydrogen gas of 3 MPa is introduced into 2.0 g of the hydrogen storage alloy powder to absorb hydrogen, and the hydrogen is desorbed at 45°C; and the average particle size of the hydrogen storage alloy powder after the test of the 50 cycles (post-cycling particle size, D_{50}) is measured with a particle size distribution measuring device.

22. (Currently Amended)   A low Co hydrogen storage alloy having a $CaCu_5$ crystal structure that can be represented by the general formula $MmNi_aMn_bAl_cCo_d$, wherein Mm is a Misch metal, $4.31 \leq a \leq 4.7$, $0.3 \leq b \leq 0.65$, ~~$0.2 \leq c \leq 0.5$~~ $\underline{0.2 \leq c < 0.37}$, $0 < d \leq 0.35$, ~~$5.2 \leq a + b + c + d \leq 5.5$~~,

wherein, in a composition of $5.35 \leq a + b + c + d < 5.40$, the a-axis length of the crystal lattice is not less than 499.8 pm and not more than 502.3 pm, and the c-axis length is not less than 406.0 pm and not more than 407.3 pm,

wherein the pulverization residual rate obtained by the following equation is 50% or more:

Pulverization residual rate (%) = (post-cycling particle size/pre-cycling particle size) x 100,

when a hydrogen storage alloy is ground and screened to select particles with a particle size in the range of 20 μm and 53 μm to provide hydrogen storage alloy powder, and after measuring with a particle size distribution measuring device the average particle size (pre-cycling particle size, D_{50}) of the hydrogen storage alloy powder; 2 g of the hydrogen storage alloy powder is weighed and placed into a PCT holder; the surfaces thereof are cleaned twice under hydrogen pressure of 1.75 MPa; then activation is carried out twice by introducing hydrogen of 3 MPa; next, a cycle test using a PCT device is then repeated 50 times, wherein hydrogen gas of 3 MPa is introduced into 2.0 g of the hydrogen storage alloy powder to absorb hydrogen, and the hydrogen is desorbed at 45°C; and the average particle size of the hydrogen storage alloy powder after the test of the 50 cycles (post-cycling particle size, D_{50}) is measured with a particle size distribution measuring device.

23. (Currently Amended)   A low Co hydrogen storage alloy having a $CaCu_5$ crystal structure that can be represented by the general formula $MmNi_aMn_bAl_cCo_d$, wherein Mm is a Misch metal, $4.31 \leq a \leq 4.7$, $0.3 \leq b \leq 0.65$, ~~$0.2 \leq c \leq 0.5$~~ $\underline{0.2 \leq c < 0.37}$, $0 < d \leq 0.35$, ~~$5.2 \leq a + b + c + d \leq 5.5$~~,

wherein, in a composition of $5.40 \leq a + b + c + d < 5.45$, the a-axis length of the crystal lattice is not less than 499.7 pm and not more than 502.3 pm, and the c-axis length is not less than 406.1 pm and not more than 407.4 pm,

wherein the pulverization residual rate obtained by the following equation is 50% or more:

Pulverization residual rate (%) = (post-cycling particle size/pre-cycling particle size) x 100,

when a hydrogen storage alloy is ground and screened to select particles with a particle size in the range of 20 μm and 53 μm to provide hydrogen storage alloy powder, and after measuring with a particle size distribution measuring device the average particle size (pre-cycling particle size, D_{50}) of the hydrogen storage alloy powder; 2 g of the hydrogen storage alloy powder is weighed and placed into a PCT holder; the surfaces thereof are cleaned twice under hydrogen pressure of 1.75 MPa; then activation is carried out twice by introducing hydrogen of 3 MPa; next, a cycle test using a PCT device is then repeated 50 times, wherein hydrogen gas of 3 MPa is introduced into 2.0 g of the hydrogen storage alloy powder to absorb hydrogen, and the hydrogen is desorbed at 45°C; and the average particle size of the hydrogen storage alloy powder after the test of the 50 cycles (post-cycling particle size, D_{50}) is measured with a particle size distribution measuring device.